

### **REMARKS**

Claims 1-8 are pending. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

#### ***Claim Rejections Under 35 U.S.C. § 102***

Claims 1-6 were rejected under 35 U.S.C. § 102(e) over Skotnicki et al. (U.S. Patent No. 6,713,356). Applicants respectfully traverse this rejection.

Claim 1 recites, in part, a method for fabricating a semiconductor optical device that includes depositing a material having a good heat transfer property so that the air gap is buried. The Office Action alleges, on page 2, that this feature is disclosed by Skotnicki. Applicants respectfully disagree.

Specifically, the Office Action relies on Skotnicki's disclosure of dielectric layer 20 as allegedly being equivalent to the material discussed above with respect to claim 1. However, dielectric 20 is used to fill a first tunnel. Therefore, the dielectric 20 does not bury an air gap since it merely eliminates a tunnel by filling it. See, for example, column 4, lines 3-12 and Figures 2d and 2e. Accordingly, Skotnicki fails to teach, or even suggest, a method for fabricating a semiconductor optical device that includes depositing a material having a good heat transfer property so that the air gap is buried, as recited in claim 1.

Claims 2-6 are believed allowable for at least the reasons presented above with respect to claim 1 by virtue of their dependence upon claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

#### ***Allowable Subject Matter***

Applicants appreciate the Examiner's indication that claims 7 and 8 contain allowable subject matter and would be allowable if rewritten in independent form to include all of the features of their base claim and any intervening claim. In view of the foregoing, however, all of the claims (claims 1-8) are believed to be in form for allowance.

#### ***Conclusion***

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

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